REMARKS

This Amendment responds to the Office Action mailed November 1, 2007 in the above-identified application. Based on the foregoing amendments and the following comments, reconsideration and allowance of the application are respectfully requested.

Claims 1-40, 42 and 44-52 were previously pending in this application. Claim 40 has been amended. Accordingly, claims 1-40, 42 and 44-52 are pending for examination, with claims 1, 23, 40 and 48 being independent claims. No new matter has been added.

Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1, 3, 7-13, 23, 25-30, 35 and 48-52 under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. (U.S. 2003/0185148) in view of Saleh et al. (U.S. 6,801,496). Claims 2 and 24 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, and further in view of Fortuna (U.S. 6,778,833). Claim 4 is rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 3, and further in view of Lotter et al. (U.S. 7,218,645). Claim 5 is rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, and further in view of Rabie et al. (U.S. 7,092,356). Claims 14 and 31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, and further in view of Havansi (U.S. 5,905,714). Claims 15 and 32 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, and further in view of Greaves et al. (U.S. 6,396,815). Claims 16 and 33 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Saleh et al. as applied to claim 1, and further in view of Liu et al. (U.S. 2005/0068954). Claims 17, 19-22 and 36-39 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Saleh et al. and Liu et al. as applied to claim 16, and further in view of Izmailov et al. (U.S. 2005/0015511). Claims 40, 42 and 45 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Liu et al. Claim 44 is rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Liu et al. as applied to claim 40, and further in view of Saleh et al.

Claims 46 and 47 are rejected under 35 U.S.C. §103(a) as being unpatentable over Shinomiya et al. in view of Liu et al. as applied to claim 40, and further in view of Izmailov et al. Based on the Office Action Summary, claims 6, 18 and 34 are apparently allowable if rewritten in independent form. The rejections are respectfully traversed.

Claims 1-22

Regarding claim 1, as acknowledged by the Examiner in the Office Action, Shinomiya does not disclose *creating a failure notification group comprising the plurality of nodes, wherein the failure notification group has a unique identifier* and *associating with the unique identifier of the failure notification group a failure handling method of a distributed application running on some or all of the nodes of the failure notification group.* (Office Action at 3).

Saleh does not remedy these deficiencies of Shinomiya. Saleh does not disclose *creating a failure notification group comprising the plurality of nodes, wherein the failure notification group has a unique identifier.* Saleh describes nodes that are "divided into logical groups referred to ... as 'zones'" (col. 4, lines 12-13) and each zone can be assigned a zone ID (col. 5, lines 39-47). The zones described by Saleh, however, are "logical groups," and the zones do not constitute failure notification groups, as required by claim 1.

Further, Saleh also contains no disclosure or suggestion of *associating the unique identifier with a failure handling method of a distributed application running on some or all of the nodes of the failure notification group,* as required by claim 1. Saleh discloses zones, where each zone is comprised of a plurality of nodes, and "each zone can be configured to run a separate copy of the topology distribution process, and nodes within each zone are only required to maintain information about their own zone." (Col. 4, lines 17-20). In Saleh, the topology distribution process is not a failure handling method . "The topology database maintained by a given node is ... nothing more than a list of the most recent [Link State Advertisements] generated by its peers...." (Col. 7, lines 40-43). The Link State Advertisement is "a list of the node's neighbors, links, the capacity of those links, the quality of service available on over links, one or more costs associated with each of the links, and other pertinent information." (Col. 7, lines 25-28). Saleh thus does not disclose nodes that run a *failure handling method* as required by claim 1.

For at least these reasons, claim 1 is clearly and patentably distinguished over Shinomiya in view of Saleh, and withdrawal of the rejection is respectfully requested.

Claims 2-22 depend from claim 1 and are patentable over the cited references for at least the same reasons as claim 1.

Claims 23-39

Regarding claim 23, as acknowledged by the Examiner in the Office Action, Shinomiya does not disclose *creating a failure notification group comprising the plurality of nodes, wherein the failure notification group has a unique identifier* and *associating with the unique identifier of the failure notification group a failure handling method of a distributed application running on some or all of the nodes of the failure notification group.* (Office Action at 7).

As should be clear from the foregoing, Saleh does not remedy these deficiencies of Shinomiya. For at least these reasons, claim 23 is clearly and patentably distinguished over Shinomiya in view of Saleh, and withdrawal of the rejection is respectfully requested.

Claims 24-39 depend from claim 23 and are patentable over the cited references for at least the same reasons as claim 23.

Claims 40, 42, and 44-47

Regarding claim 40, as acknowledged by the Examiner in the Office Action, Shinomiya does not disclose joining a failure notification tree *wherein joining the failure notification tree includes: receiving a first message from a creator node of a failure notification group through an overlay routing path; recording a pointer to an overlay node from which the first message was received; forwarding the first message to a node in the failure notification group via a next node in the overlay routing path; receiving a second message from the node in the failure notification group through the overlay routing path; recording a pointer to an overlay node from which the second message was received; and forwarding the second message to the creator node via the overlay node from which the first message was received.* (Office Action at 22-23).

Liu does not remedy these deficiencies of Shinomiya. Liu does describe a method for joining a "distribution tree," but the method described in Liu is completely different from the method recited in claim 40. In Liu, a node "joins the distribution tree by communicating to the

sender their location (network address), network related attributes, and their communication topic. The source maintains an index of receiver addresses and their associated properties." (Par. 20). "For each new join, the source inserts the address of the new node and its properties in the index." (Par. 20).

The method for creating the distribution tree in Liu thus does not include *receiving a first message from a creator node of a failure notification group through an overlay routing path; recording a pointer to an overlay node from which the first message was received; forwarding the first message to a node in the failure notification group via a next node in the overlay routing path; receiving a second message from the node in the failure notification group through the overlay routing path; recording a pointer to an overlay node from which the second message was received; and forwarding the second message to the creator node via the overlay node from which the first message was received,* as required by claim 40. By contrast, Liu creates the distribution tree by "communicating to the sender their location (network address)." (Par. 20). This is completely different from the method described in claim 40 which creates the failure notification tree by using an overlay routing path and recording pointers from overlay nodes.

Liu also describes the dynamic repair of communication trees. (Pars. 43-44). Applicants respectfully contend that a method for **repairing** a communication tree is fundamentally different from a method for **joining** a failure notification tree as recited in claim 40. A method of repairing a communications tree involves "remov[ing] failed nodes by forwarding the data packet to the node to which a failed node would have forwarded the data packet." (Par. 9). By contrast, joining a failure notification tree involves *receiving a first message from a creator node of a failure notification group through an overlay routing path; recording a pointer to an overlay node from which the first message was received; forwarding the first message to a node in the failure notification group via a next node in the overlay routing path; receiving a second message from the node in the failure notification group through the overlay routing path; recording a pointer to an overlay node from which the second message was received; and forwarding the second message to the creator node via the overlay node from which the first message was received.*

For at least these reasons, claim 40 is clearly and patentably distinguished over Shinomiya in view of Liu, and withdrawal of the rejection is respectfully requested.

Claims 42 and 44-47 depend from claim 40 and are patentable over the cited references for at least the same reasons as claim 40.

Claims 48-52

Regarding claim 48, as acknowledged by the Examiner in the Office Action, Shinomiya does not disclose *creating a failure notification group and assigning a unique identifier to the failure notification group* and *associating with the unique identifier a failure handling method of a distributed application running on some or all nodes of the failure notification group*. (Office Action at 10).

As should be clear from the foregoing, Saleh does not remedy these deficiencies of Shinomiya. For at least these reasons, claim 48 is clearly and patentably distinguished over Shinomiya in view of Saleh, and withdrawal of the rejection is respectfully requested.

Claims 49-52 depend from claim 48 and are patentable over the cited references for at least the same reasons as claim 48.

Based upon the above discussion, claims 1-40, 42 and 44-52 are in condition for allowance.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

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Respectfully submitted,

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